

## University of Dundee

### Citizen Science Projects (MOOC) 3.13

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*Publication date:*  
2020

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*Citation for published version (APA):*

Woods, M., Coulson, S., Ajates, R., Amditis, A., Cobley, A., Domian, D., Hager, G., Ferri, M., Fraisl, D., Fritz, S., Gold, M., Karitsioti, N., Masó, J., McCallum, I., Tomei, G., Monego, M., Moorthy, I., Prat, E., Tsertou, A., ... Wehn, U. (2020). Citizen Science Projects (MOOC) 3.13: Test your knowledge. WeObserve.

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Question	Correct answer(s)	Educator feedback (Who should be listed as educator for this quiz?)	Hint step
<p>Photographs are becoming a type of data commonly collected in citizen science projects. What issues need to be addressed if the project is running in Europe (choose all that apply):</p> <p>A Faces need to be blurred</p> <p>B Location data needs to be removed</p> <p>C License plates need to be blurred</p> <p>D Dates and times need to be removed</p>	A, C	<p>For reasons related to the EU data protection regulation (GDPR), photographs needs have any faces blurred and any licence plates blurred to avoid identification. Location data can be sensitive but knowing the location, date and time is important contextual information to accompany observations. When making your dataset open access, you might have to hide specific location data (e.g. if sensors are placed in participants' gardens).</p>	
<p>Keeping your participants motivated is an important part of setting up a citizen observatory.</p> <p>A Create a facebook group with regular interaction</p> <p>B Provide coffee and biscuits at each event</p> <p>C Send personalised emails to each participant</p> <p>D Demonstrate impact based on the data collected</p>	D	<p>A, B and C might promote engagement and increase motivation but the best way is to demonstrate to citizens that they are making a real impact on the issue through the data collected, e.g., a city might make a change and improve the situation because of the citizen observatory.</p>	
<p>You've collected lots of data through different sensors. How can you make the data more useful for your participants (choose all that apply):</p> <p>A Provide the raw data as an Excel file</p> <p>B Plot the data over time as a graph (if data are collected over time)</p>	B, C, D	<p>Providing visual aids for interpreting the data in the form of maps and graphs can help participants understand the data. Adding other sources of data (e.g., from an authoritative data source) can provide for comparison or added value. Providing the raw data is really only for users who understand how to interpret the data. The</p>	

<p>C Plot the data on a map (if location is available)</p> <p>D Integrate other sources of data with the data collected (for comparison or added value)</p>		<p>example from the GROW soil moisture sensors demonstrated how difficult the data can be to understand. Hence providing some visual tools can make all the difference and also engage the participants further.</p>	
<p>Data quality is a real concern in citizen science. What methods have you learned about that might help improve data quality (select all that apply):</p> <p>A Flag measurements that are outside of an allowable range</p> <p>B Add a user rating scheme which provides a trustworthiness score to the data based on user performance</p> <p>C Check the data against some reference data which the values are known</p> <p>D Calculate the contributor agreement to flag observations with high values of agreement</p>	A, B, C, D	<p>All of these methods can be used to improve the quality of data collected by citizens, and there are other methods available including peer review as well as providing good training materials.</p> <p>You may find [Step 3.10: 'Types of visualisation: What types for what data?'](<a href="https://www.futurelearn.com/courses/weobserve-the-earth/3/steps/870661">https://www.futurelearn.com/courses/weobserve-the-earth/3/steps/870661</a>) helpful.</p>	<p>You may find [Step 3.10: 'Types of visualisation: What types for what data?'](<a href="https://www.futurelearn.com/courses/weobserve-the-earth/3/steps/870661">https://www.futurelearn.com/courses/weobserve-the-earth/3/steps/870661</a>) helpful.</p>
<p>What kinds of data can be visualized using the Scent Campaign Manager (choose all that apply):</p> <p>A Sensor measurements</p> <p>B Data on land cover and land use</p> <p>C Odour maps</p> <p>D Noise maps</p>	A, B	<p>The Scent visualisation tool allows users to visualise sensor measurements and data on land cover and land use, among others. However, this citizen observatory does not address obnoxious odours or noise pollution.</p>	
<p>Biodiversity is a key area for citizen science, and is monitored by a number of the citizen observatories presented here including phenology,</p>	A	<p>Phenology refers to the stages of growth of a plant or animal. Monitoring changes in when these stages occur and how long they take can indicate if climate change is affecting ecosystems.</p>	<p><b>3.2 Action spotlight: biodiversity</b></p>

<p>which is important because:</p> <p>A Changes in phenology can indicate the effects of climate change on ecosystems</p> <p>B Changes in phenology can lead to food shortages</p> <p>C The phenology of plants and animals is closely tied to one another and can indicate ecosystem disturbances</p> <p>D None of the above</p>			
<p>Community-level Indicators (choose all that apply):</p> <p>A help to make the invisible, visible</p> <p>B are decided on by scientists</p> <p>C give complementary information to the data that is being collected</p> <p>D focus on the environment and on cause and effect surrounding the environmental issue</p>	A, C, D		
<p>Two common types of data visualisations are ___ and ___</p>	<p>Maps</p> <p>Time-series graphs</p>	<p>Times-series graphs and Maps are common types of data visualisations. Time-series graph shows how a variable changes over a period of time. Maps show information and data in relation to a specified system of reference.</p>	<p>Some data can be stable or capture a single point in time, these are known as static and other data change over time and are dynamic. Data can also demonstrate a relationship between two or more variable.</p>